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ABSTRACT

Forty-seven elementary school teachers, librarians, curriculum specialists, and administrators participated in a research oriented education course that consisted of 15 television programs designed to help elementary school teachers and students analyze and understand economic concepts. Teachers also: (1) viewed programs with students; (2) used a prepared course study guide; (3) evaluated students' work; (4) took the pre- and post-test on the Test of Economic Literacy (TEL); and (5) attended at least one course-related workshop. Fourteen other teachers taught economics but did not participate in this program. They and their students comprised the control group. Students in the experimental group received higher scores on the Basic Education Test (BET) than did students in the control group. Teachers in the experimental group: (1) had higher TEL post-test scores than pre-test results and had post-test scores higher than the TEL test scores of teachers in the control group; (2) developed more positive attitudes toward consumer activities; (3) experienced reduced anxiety toward economics activities; and (4) developed more practical definitions of economics. (JHP)

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INVITING TEACHERS AND THEIR STUDENTS TO SUCCEED IN THE "MUSTY" SCIENCE OF ECONOMICS: EVALUATION OF ACHIEVEMENT AND ATTITUDE CHANGES

by

Melvin Lang

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A SUMMARY

Inviting Teachers and Their Students to Succeed in the "Musty" Science of Economics: Evaluation of Achievement and Attitude Changes.

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Will upper elementary school teachers and their students learn economics from watching and participating in a televised course in consumer economics?

What will be the effect of the courses on teacher attitudes towards the "musty science" of economics; that is will they like economics more; will they enjoy participating in consumer economic activities both in school as teachers and out of school as consumers?

Forty-seven upper elementary school teachers, grades 4-7, librarians, curriculum specialists and administrators enrolled in "Trade-Offs", a series of 15 television programs, each 20 minutes long designed to help upper elementary age students (9-13 years old) think their way through economic problems and to increase their understanding of economic concepts. Using dramatization each of the fifteen programs considers a fundamental economic problem relevant to the daily life of the youngster, emphasizes the economic principles and reasoning processes involved in dealing with the problem and introduces similar unresolved problems to stimulate classroom discussion and follow up activities.

An example of this is the first program which deals with the fundamental economic fact of scarity. The program is about children who like everyone

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else have limited amounts of resources such as time and money. In making choices the boys and girls in the programs realize they can't have everything. Inevitably, choosing among trips, ball games, food, camera film, or movies means giving up the opportunity to choose something else. Students identify opportunity costs, make personal choices and apply the principles to local issues.

The 47 teachers participated in the in-service course by 1) previewing each program then viewing with their students, 2) using a course study guide which contained materials for each lesson which identified key economic concepts, suggestions for introducing each program to their students, and activities for reinforcement and application of the economic problems posed in each program 3) evaluating students work 4) diagnosing their own economic literacy by studying the correct answers with their economic rationale on the TEL (Test of Economic Literacy), and 5) optional attendance at one workshop where the economic content and teaching techniques of the programs were discussed.

Fourteen other teachers who taught social studies to upper elementary school students but were not in the treatment group participating in the televised course, were designated as the control group.

One summative evaluation of the study was to determine the effect of the course upon teachers' achievement as defined by the differences in scores in the pre and post test, on the Test of Economic Literacy, (TEL) a widely used instrument of economic understanding in teacher training workshops and experimental settings. The economic content categories of the TEL questions include 1) Basic economic problems such as scarity and choices, opportunity costs, etc., 2) the nature and types of economic systems, 3) microeconomics, 4) macroeconomics, 5) world economy, 6) economic institutions, and 7) concepts for evaluating economic actions and policies.

Comparison of pre (TEL Form A) and post test (TEL Form B) mean scores and standard deviations within the treatment group and between the post test scores of the treatment and control showed a significant "t" test result ($p<.01$) in favor of the treatment group.

This study also included comparing 460 students of 18 teachers in the treatment group to 136 students of 6 teachers in the control group. The difference between the two groups was that the treatment group of students viewed the entire series and also participated in lessons provided by the teachers to reinforce the concepts introduced in the program. The control group of students did not view the series.

The effect upon the students achievement was defined by the differences in scores, on the pre and post tests, on the Basic Economic Test (BET) an achievement test of basic principles of economics designed for upper elementary grades by the Joint Council on Economic Education. The treatment group was administered both a pre-test (BET form A) and a post-test (BET-form B). The control group was given only the post test. Multiple linear regression analysis controlled for the background effect of sex, public or private school enrollment and class size.

A quasi-experimental time series nonequivalent control group design was used to analyze the means, standard deviations and values of t. The t within and between groups, values were significant ($p<.01$), therefore giving confidence that 4th to 8th graders who participated in "Trade-Offs" made significant gains in consumer economic understanding.

The course also offered teachers many ways to grow professionally, or "to be professionally inviting with oneself", in order to enjoy learning about, teaching about and personally participating in consumer economic activities. These "inviting" techniques and activities included:

1. Providing a skills matrix that correlated specific learning skills with particular lessons to encourage integrating economics with arithmetic, reading, civics.
2. Providing a library of professional books, articles and films to help teachers update their knowledge of current issues and concepts.
3. Providing tuition free invitations to a special conference and a half day workshop to learn about new curriculum materials in consumer economics such as simulation games, filmstrips, texts, childrens books.
4. Forming study teams with other teachers using "Trade-Offs" so that participants could share their successful teaching techniques and activities and to provide an opportunity to discuss candidly their concerns about consumer economics.
5. Providing feedback on the results of their learning and their students learning such as furnishing scores and the correct answers to each question in the Basic Economic tests (students) and the Test of Economic Literacy (teacher) together with an explanation of the economic rationale of each correct answer.
6. Showing teachers how to use local sources of materials and resource persons to create case studies relevant to their own and their students interests.
7. Conducting projects that could make a difference in their own lives; their students' lives, or the life of their community.

The most encouraging result of the course upon teachers attitudes was that teachers requested that a second level televised course "Give and Take" be offered by our Center for Economic Education during the next school year.

Using a semantic differential, usually regarded as a good tool for measuring emotional reactions to a topic, and a self report survey it was found that:

1. Teacher attitudes toward personal economics in their community became more positive; that is they became more interested in, as measured by increased participation in, consumer activities.
2. Teacher's anxiety about economics or everyday situations that arouse feelings of tension or anxiousness that interfere with the manipulation, reading or solving of economic problems, was reduced.
3. Teachers definitions of economics changed as they began to understand how economics permeated their lives. Increased knowledge and skills increased their control over their own lives in a beneficial way as they began to make rational choices as consumers and citizens in a variety of personal and social situations.

Other formative evaluations of teachers increased participation in consumer and personal economic activities both in and out of school included analysis of 1) video tapes and photographs of students in their classrooms, 2) samples of students work, 3) teacher logs, and 4) classroom observations by course instructors.

We found that:

1. A group of special education teachers adapted the televised course by adding "signing" to each program so that the series could be used by deaf children.
2. A group of librarians and curriculum specialists prepared supplementary programmed instructional materials and sound filmstrips that could be used for classroom reinforcement or individual home instruction for children temporarily out of school.

3. Teachers designed resource files of persons, public agencies, and private organizations in their community that could help in consumer economics class discussions, demonstrations, and in organizing field trips. These teachers indicated and explained the relationship of each entry in the resource file to the concepts or skills in particular programs in the "Trade-Off" series.
4. Teachers designed case studies in written, graphic, and pictoral forms. They identified objectives of consumer economics knowledge skills or attitudes, such as consumer protection, credit, inflation, savings and investing, societal decision making, role of local government, taxation and career decision. These case studies took the form of court cases, newspaper articles and historical documents. Learning strategies such as role playing, debating, interviewing, etc., accompanied each case study.
5. Secondary teachers who taught courses in food service, auto mechanics; metal and other pre-industrial preparation curricula designed their own course syllabi integrating particular program in the series.
6. A group of teachers in a private school evaluated computer software in consumer economics that could be used with their Apple II Plus microcomputers. Plans have already been made to increase their schools number of computers for special use of students enrolled in their consumer education course toward a goal of "computer literacy".

We already know that television is the most common and familiar form of mass media instruction. This study lends support to the belief that it can be not only a cost effective but also a learning effective method for